

Disposable element for use with a hearing screener

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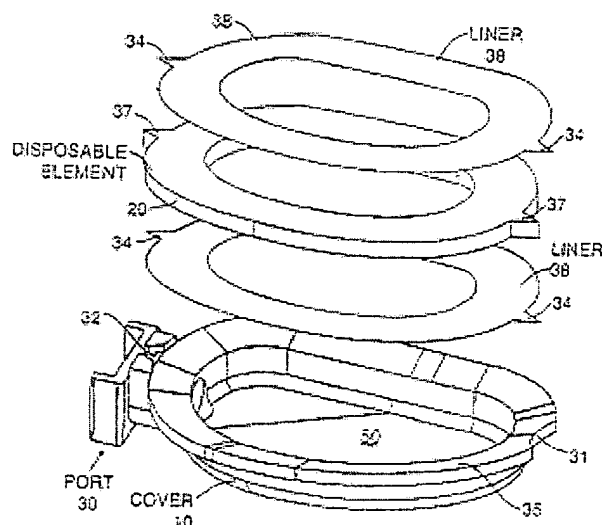
WO9852504 (A1)
EP1011566 (A1)
US5913309 (A1)
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Abstract not available for JP2002500532T

Abstract of corresponding document: **US5913309**

A disposable element for ear phone assembly is provided for use with a hearing screening instrument to test infants for hearing impairments. The ear phone assembly includes a generally D-shaped reusable cover including a back wall having a perimeter, a side wall extending from the perimeter to define a cavity for receiving an infant's ear, a port in the cover to receive and support a transducer, and a generally D-shaped disposable element that is adhesive coated on two sides to be secured to the cover and to the patient's head. The cover may have a notch located along the perimeter of the re-usable body for removing the disposable element. A liner is used to cover the disposable element adhesive sides to protect them from contamination during packaging and prior to use. The disposable element may have a die cut so that a portion of it can be removed to make the ear phone adjustable for infants with large ears. The ear phone is low in cost and capable of being used with any conventional hearing screening equipment.



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Disposable element for use with a hearing screener

Claims of corresponding document: **US5913309**

We claim:

1. A disposable element for use with an ear phone system for hearing screening, comprising:
an annular sheet of a support material having a first side and a second side, each of said first and second sides having thereon an adhesive; and
a first liner and a second liner respectively mounted on said adhesives on the first and second sides, the first and second liners being removable.
2. The element of claim 1 wherein each liner and at least one of the first and second sides further comprise an outer perimeter which is generally D-shaped.
3. The element of claim 1 wherein at least one of the first and second liners further comprises a release paper.
4. The element of claim 1 wherein the annular sheet of support material is flat in an unstressed condition and the disposable element is symmetrical about the plane and interchangeable to fit about a right ear and a left ear.
5. The element of claim 1 wherein the adhesive on said first and second sides further comprises the same adhesive.
6. The element of claim 1 wherein the adhesive on at least one of said first and second sides further comprises a hydrogel.
7. The element of claim 1 wherein the annular sheet of support material further comprises a resilient foam material.
8. The element of claim 7 wherein the resilient foam material further comprises an open-celled foam.
9. The element of claim 8 wherein the resilient foam material further comprises a PVC foam.
10. The element of claim 8 wherein the disposable element further comprises a thickness of approximately 1/4".
11. The element of claim 7 wherein the resilient foam material further comprises a closed cell foam.
12. The element of claim 11 wherein the resilient foam material further comprises a polyethylene.
13. The element of claim 1 wherein the annular sheet of support material further comprises a first annular sheet defining a first area and a second annular sheet defining a second area, said at least first and second annular sheets being co-planar and the second annular sheet circumscribing the first annular sheet, wherein the first annular sheet is separately removable from the second annular sheet.
14. The element of claim 1 further comprises an edge surface and a first alignment projection projecting from said edge surface.
15. The element of claim 14 further comprising a second alignment projection extending from said edge, wherein the first and second alignment projections define an orientation of said element first and second sides relative to a reference point.
16. The element of claim 15 wherein the annular sheet has an asymmetrical shape and the first and second alignment projections comprise an axis of handedness interchangeability of said disposable element.
17. The element of claim 1 wherein the adhesive on said second side further comprises a first double coated adhesive tape adhered to said first side.

18. The element of claim 16 wherein the adhesive on said second side further comprises a second double coated adhesive tape adhered to said second side.

19. An adjustable disposable element for an ear phone for use in hearing screening comprising a first annular sheet defining a first area, and a second annular sheet defining a second area, the first and second annular sheets being co-planar, the second annular sheet circumscribing the first annular sheet, wherein the first annular sheet is removably separable from the second annular sheet.

20. The adjustable disposable element of claim 19 further comprising a third annular sheet defining a third area larger than said first and second areas, the third annular sheet circumscribing the second annular sheet and being co-planar with said first and second annular sheets, wherein said first and second annular sheets are separable from the third annular sheet.

21. The adjustable element of claim 19 further comprising a die-cut separating the first and second annular sheets.

22. The adjustable element of claim 19 wherein the second annular sheet has a generally D-shape.

23. The adjustable element of claim 19 wherein the first annular sheet has a generally D-shape.

24. The adjustable element of claim 19 wherein the second annular sheet further comprises an edge and a first alignment projection projecting from said edge.

25. The adjustable element of claim 24 where the second annular sheet further comprises an asymmetrical shape and a second alignment projection projecting from said edge, wherein the first and second alignment projections define an orientation of said second annular sheet relative to a reference point.

26. The adjustable element of claim 25 wherein the first and second alignment projections define an axis of handedness interchangeability of said element.

27. The adjustable element of claim 19 further comprising a first side, a second side, a first adhesive layer on said first side and a second adhesive layer on said second side.

28. The adjustable element of claim 27 wherein the first adhesive layer further comprises a first double sided adhesive tape adhered to said first side and the second adhesive layer further comprises a double sided adhesive tape adhered to the second side.

29. The adjustable element of claim 28 further comprising a die-cut substantially separating the first and second double sided adhesive tapes.

30. The adjustable element of claim 28 wherein one of the first and second adhesive layers further comprises a hydrogel adhesive.

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